

## **REMARKS**

### **I. Amendments**

By this amendment, claims 22 and 25 have been cancelled and claims 11, 12, 26 and 28 have been amended.

This amendment adds no new matter to the specification. Support may be found in the specification and claims as originally filed.

No change in inventorship is necessitated by these amendments.

### **II. Discussion of the Rejection of Claim 25 under 35 U.S.C. 112, Second Paragraph**

The previous rejection of claim 25 under 35 U.S.C. Sec. 112, second paragraph as allegedly indefinite has been maintained.

By this amendment, claim 25 has been cancelled, rendering the rejection moot. However, claim 26, which previously depended upon claim 25 now includes the same allegedly vague language in conjunction with converting claim 26 into an independent claim. Since the phrase which the Examiner has objected to is defined, Applicants do not believe that claim 26 as amended is vague.

Applicants respectfully wish to draw the Examiner's attention to page 37, lines 17-21 wherein optional further substituents of the R<sup>4</sup> aliphatic hydrocarbon group are defined. Therefore, Applicants respectfully request withdrawal of the Sec. 112, second paragraph rejection of claim 25, and assert that claim 26 as amended is also free of this rejection.

### **III. Discussion of the Provisional Obviousness-Type Double Patenting Rejection**

Claims 11, 12, 13, 15, 22 and 24 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over the claims of co-pending U.S. Patent Application Serial No. 10/398,278. Applicants respectfully traverse the rejection.

As an initial matter, Applicants note that claim 22 has been cancelled by this amendment.

In accordance with the MPEP Sec. 804, Applicants respectfully submit that should the other outstanding rejections in the present application be overcome, that the Examiner withdraw the provisional double patenting rejection in the application with the earlier filing date (this case) and permit the application to issue as a patent.

#### **IV. Discussion of the Rejection under 35 U.S.C. Sec. 112, First Paragraph**

Claims 22 and 25 have been rejected under 35 U.S.C. Sec. 112, first paragraph as allegedly failing to comply with the written description requirement.

To expedite prosecution, Applicants have cancelled claims 22 and 25 from the present application without prejudice to the prosecution of these claims in a future continuation application.

Therefore Applicants respectfully request withdrawal of the 35 U.S.C. Sec. 112, first paragraph rejection.

#### **V. Discussion of the Rejection under 35 U.S.C. Sec. 112, Second Paragraph**

Claims 26 and 28 have been rejected under 35 U.S.C. Sec. 112, second paragraph as allegedly lacking proper antecedent basis.

By this amendment claims 26 and 28 have been amended to be independent claims, wherein antecedent basis is not an issue.

Therefore Applicants respectfully request withdrawal of the 35 U.S.C. Sec. 112, second paragraph rejection.

## VI. Discussion of the Rejection under 35 U.S.C. Sec. 103(a)

Claims 11-15, 22, 24-26 and 28 have been rejected under 35 U.S.C. Sec. 103(a) as allegedly unpatentable in view of Terao *et al.* (CA 109: 149335, U.S. equivalent Patent No. 4,857,516) and Friebe *et al.* (CA 100:22579, U.S. equivalent Patent No. 4,486,442). Applicants respectfully traverse the rejection.

As an initial matter, Applicants wish to note for the record that they disagree with the Examiner's assessment of the differences between the combined teaching of the cited art and the aspects of the invention as set forth in the pending claims. Specifically, the Examiner has stated that "Terao et al. CA 109 disclosed all the elements of the claims except the phenyl ring of the benzufuranyl (sic) bicyclic system is substituted with methyl while the instant claims are hydrogen". Applicants believe that the Examiner is referring to substitution on ring A in claim 11 or substitution on ring A' of claim 12 for example. Applicants believe that the Examiner has overlooked the fact that the claims recite that rings A and A' are optionally further substituted (apart from the substituent X-R<sup>4</sup> or O-R<sup>4</sup>), which means that they can be methyl substituted. This may be confirmed by a review of the structures of the specific compounds recited in claims 13 and 24. The structures were previously provided to the Examiner in Appendix C of the response filed May 9, 2003.

Applicants also note that claims 22 and 25 have been cancelled by this amendment, thereby rendering the rejection as to the cancelled claims moot.

### *Independent Compound Claims 11 and 12 are Unobvious over the Cited Art*

By the present amendment, a proviso was added to claims 11 and 12. This amendment adds no new matter to the specification, as the proviso was found in claim 1 as originally filed, and on page 9, lines 10 and 11 of the specification *inter alia*. Applicants believe that a salient feature of their invention as set forth in independent claims 11 and 12 as amended is the substituent R<sup>4</sup>, which can be compared to the substituent R<sup>0</sup> of Terao *et al.*

R<sup>0</sup> is defined as hydrogen or an acyl group in the equivalent Terao *et al.* U.S. Patent No. 4,857,516 in col. 2, lines 18-21. Yet in Terao *et al.*, the oxygen-containing ring does not have a double bond between the C-R<sup>5</sup> carbon and the CR<sup>3</sup>(R<sup>4</sup>) carbon. According to the proviso added to claims 11 and 12, if the bond between the CR<sup>3</sup> carbon and the CR<sup>1</sup>(R<sup>2</sup>) carbon is a single

bond, R<sup>4</sup> is not an acyl group. Therefore, there is no teaching or suggestion in Terao *et al.* of the compounds of set forth in independent claims 11 and 12

The deficiencies of Terao *et al.* are not cured by Friebe *et al.* Friebe *et al.* does not teach that R1 (the substituent on the phenyl ring in structure I from the Chem. Abstracts reference) can be an acyl group.

Therefore, the independent claims 11 and 12 are not obvious in view of the combined teachings of Terao *et al.* and Friebe *et al.*

Claims 14 and 15 depend upon claim 11. Applicants assert that the more specific dependent claims are also non-obvious for the reason stated above.

*The Specific Compounds in Independent Compound Claims 13 and 24 are Unobvious over the Cited Art*

Applicants do not believe that the specific compounds recited in claims 13 and 24 are rendered obvious by the combined teaching of the cited references. For the compound of claim 24, the substituent at the position equivalent to R<sup>4</sup> of the general formulae is not hydrogen or an acyl group. For the second and third compounds of claim 13 this is also the case. The first compound of claim 13 does have an acyl group at the position equivalent to R<sup>4</sup> of the general formulae, but also has a double bond at the right side of the bicyclic structure. These facts may be confirmed by a review of the structures of the specific compounds recited in claims 13 and 24. The structures were previously provided to the Examiner in Appendix C of the response filed May 9, 2003.

Since R<sup>0</sup> is defined as hydrogen or an acyl group in the equivalent Terao *et al.* U.S. Patent No. 4,857,516 in col. 2, lines 18-21 and the oxygen-containing ring does not have a double bond between the C-R<sup>5</sup> carbon and the CR<sup>3</sup>(R<sup>4</sup>) carbon; there is no teaching or suggestion in Terao *et al.* of the compounds of set forth in independent claims 13 and 24

The deficiencies of Terao *et al.* are not cured by Friebe *et al.* Friebe *et al.* does not teach that R1 (the substituent on the phenyl ring in structure I from the Chem. Abstracts reference) can be an acyl group.

Therefore, the independent claims 13 and 24 are not obvious in view of the combined teachings of Terao *et al.* and Friebe *et al.*

*Independent Method Claims 26 and 28 are Unobvious over the Cited Art*

Independent method claims 26 and 28 are directed to methods for treating Alzheimer's disease with compounds of specified formulae.

As explained above, there is no teaching or suggestion in Terao *et al.* of the compounds of set forth in independent claims 26 and 28. Most specifically, R<sup>4</sup> is neither hydrogen nor acyl in claim 26 as amended. Claim 28 includes the proviso discussed above.

The deficiencies of Terao *et al.* are not cured by Friebe *et al.* for the reason provided above.

Therefore, the independent claims 26 and 28 are not obvious in view of the combined teachings of Terao *et al.* and Friebe *et al.*

Therefore Applicants respectfully request withdrawal of the 35 U.S.C. Sec. 103(a) rejection.

**VII. Conclusion**

Reconsideration of the claims and allowance is requested.

Should the Examiner believe that a conference with Applicants' attorney would advance prosecution of this application, she is respectfully requested to call Applicants' attorney at (847) 383-3391.

Respectfully submitted,

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(847) 383-3391

(847) 383-3372

Elaine M. Ramesh  
Elaine M. Ramesh, Ph.D., Reg. No. 43,032  
Mark Chao, Ph.D., Reg. No. 37,293

Attorney for Applicants  
Customer No. 23115

Takeda Pharmaceuticals North America, Inc.  
Intellectual Property Department  
Suite 500, 475 Half Day Road  
Lincolnshire, IL 60069 USA